



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2017-1059; Product Identifier 2017-CE-035-AD]

RIN 2120-AA64

Airworthiness Directives; Piper Aircraft, Inc. Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Supplemental notice of proposed rulemaking (SNPRM); reopening of comment period.

SUMMARY: The FAA is revising an earlier proposal for certain Piper Aircraft, Inc. (Piper) Models PA-28-140, PA-28-150, PA-28-160, PA-28-180, PA-28-235, PA-32-260, and PA-32-300 airplanes. This action revises the notice of proposed rulemaking (NPRM) by including a revision to the manufacturer's service information, including an additional inspection method, and removing the requirement to install the access panel. The FAA is proposing this airworthiness directive (AD) to address the unsafe condition on these products. Since the actions in the revised service information would impose an additional burden over those in the NPRM, the FAA is reopening the comment period to allow the public the chance to comment on these changes.

DATES: The comment period for the NPRM published in the Federal Register on November 7, 2017 (82 FR 51583), is reopened.

The FAA must receive comments on this SNPRM by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this SNPRM, contact Piper Aircraft, Inc., 2926 Piper Drive, Vero Beach, Florida 32960; telephone: (772) 567-4361; internet: www.piper.com. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Examining the AD Docket

You may examine the AD docket on the internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2017-1059; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this SNPRM, the regulatory evaluation, any comments received, and other information. The street address for Docket Operations is listed above. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Dan McCully, Aerospace Engineer, FAA, Atlanta ACO Branch, 1701 Columbia Avenue, College Park, Georgia 30337; telephone: (404) 474-5548; fax: (404) 474-5606; email: william.mccully@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2017-1059; Product Identifier 2017-CE-035-AD” at the beginning of your comments. The FAA will consider all comments received by the closing date and may amend this proposed AD because of those comments.

Except for Confidential Business Information as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments we receive, without change, to <https://regulations.gov>, including any personal information you provide. The FAA will also post a report summarizing each substantive verbal contact it receives about this proposed AD.

Confidential Business Information

Confidential Business Information (CBI) is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Dan McCully, Aerospace Engineer, FAA, Atlanta ACO Branch, 1701 Columbia Avenue, College Park, Georgia 30337; telephone: (404) 474-5548; fax:

(404) 474-5606; email: william.mccully@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Discussion

The FAA issued an NPRM to amend 14 CFR part 39 by adding an AD that would apply to certain serial-numbered Piper Models PA-28-140, PA-28-150, PA-28-160, PA-28-180, PA-28-235, PA-32-260, and PA-32-300 airplanes. The NPRM was published in the *Federal Register* on November 7, 2017 (82 FR 51583). The NPRM was prompted by reports of significant corrosion found in an area of the main wing spar not easily accessible for inspection. The NPRM proposed to require installing inspection access panels in the lower wing skin near the left and the right main wing spars (if not already there), inspecting for corrosion, and taking all necessary corrective actions if corrosion is found.

Actions Since the NPRM was Issued

Since the FAA issued the NPRM, Piper revised its service information to add a minimum thickness dimension for the top inboard wing skin and to include procedures for reapplying corrosion preventive compound if removed during the inspection. The FAA is incorporating these revised procedures into the proposed AD. Also, at the request of some commenters, the FAA has replaced the proposed requirement to install access panels for the visual inspection with optional access methods: the use of existing access panels, installation of access panels, accessing the area during a concurrent inspection, or using a borescope through existing holes or openings.

Comments

The FAA gave the public the opportunity to comment on the NPRM. The following presents the comments received on the NPRM and the FAA's response to each comment.

Requests Regarding the FAA's Justification of the Unsafe Condition

The Airline Owners and Pilots Association (AOPA) and five individual commenters requested that the FAA provide more information about the events surrounding the two damaged airplanes that prompted this proposed AD. Specifically, the commenters asked about the history, climate, storage, location, and operating conditions of the two damaged airplanes. AOPA further requested that the FAA publish its Small Airplane Risk Assessment (SARA) of the unsafe condition.

Four commenters requested that the NPRM be withdrawn as not warranted or not justified as an unsafe condition.

The FAA agrees to provide additional information about the events that prompted the NPRM. One of the subject airplanes is a Model PA-28-140 registered in Chile, on which severe corrosion of the left-hand main spar assembly was discovered during maintenance to add a wing inspection panel. Corrosion damage of a similar extent was found in the same location on a Model PA-28-161 registered in Scotland. The Model PA-28-161 airplane had inspection access panels installed, but the airplane had not been properly inspected. As FAA regulations do not require owners to maintain records of an airplane's operating history, the information requested by the commenters about the climate, storage, and operating conditions of these airplanes is unknown.

The corrosion observed on the subject wing spars penetrated through more than 25 percent of the cross sectional area, to the extent that failure was imminent, and therefore qualified as a Primary Structure Hazard Level 5 under the FAA's SARA process. A subsequent Corrective Action Review Board determined that the similarity, extent, and location of the corrosion in the subject airplanes poses a safety concern requiring corrective action for airplanes with wings of a similar design. The airplanes listed in the applicability of the proposed AD have wings with the same cross sectional member, shape, and material, and thus are subject to this same unsafe condition. The FAA limited applicability to models of an older design that did not include wing

inspection access panels because of the likelihood that corrosion has been overlooked. The FAA has not changed this proposed AD based on these comments.

Request to Allow Borescope Inspection Instead of Installation of Access Panels

Over thirty commenters requested the proposed AD allow a borescope inspection method instead of installing access panels in the wing skin.

The commenters stated that the borescope inspection method is a more cost-effective and less invasive option than the purchase and installation of the Piper access panel kit. The borescope inspection method also mitigates damage risk to the airplane structure associated with cutting the wing skin to install the Piper kit. Several commenters requested the proposed AD require installing smaller inspection holes to facilitate a borescope inspection. Other commenters stated, in some cases, existing access points such as inspection panels, removeable fairings, and lightening holes provided adequate access to conduct a borescope inspection.

The FAA agrees with allowing a borescope inspection method instead of requiring the installation of access panels in the wing skin. This SNPRM removes the proposed requirement to install the access panels. Due to the many variations and types of inspection openings possible on different model airplanes, it is not feasible for the FAA to specify access options for each particular airplane. As a result, the FAA has not changed the proposed AD to require smaller inspection holes. Instead, the SNPRM proposes four options for gaining access to the inspection area, including using a borescope through existing access points.

Request to Access Inspection Area during Wing Tank Removal

Six commenters requested the proposed AD allow access to the inspection area by removing the wing tank.

The FAA agrees and has changed this proposed AD to allow inspection during concurrent maintenance, such as when the wing tank has been removed, as an option for gaining access to the inspection area.

Request for a Definitive Corrosion Removal Parameter

William Goebel and Robert Nelson requested the FAA remove the requirement to inspect for “any evidence of corrosion” and instead provide criteria or a quantifiable measurement of unacceptable corrosion. The commenters stated that the wording in the NPRM is vague and will unnecessarily require corrective action and subsequent material thickness measurements for minor surface corrosion.

The FAA disagrees. Even with minor corrosion removal, the thickness of the affected structure must be verified for remaining strength. The criteria in the service information for determining the minimum acceptable thickness of the wing components are based on actual remaining strength computations for each component of the wing structure. While some elements of the spar can sustain liberal material removal and retain adequate strength without additional reinforcement, other elements can sustain little or no reduction in thickness before strength is compromised and repair is required. The FAA has not changed the corrective action requirements for corrosion based on these comments.

Request for Clarification of the Required Inspection Area

Andrew Durbin and Michael Dieck requested the FAA clarify the areas to be inspected, as the instructions in Piper Service Bulletin No. 1304, dated August 23, 2017, are vague and contradictory and contain errors.

The FAA agrees that the inspection area described in Piper Service Bulletin No. 1304, dated August 23, 2017, is open to misinterpretation. The FAA has changed the proposed AD to include specific inspection areas.

Request Local Fabrication of the Inspection Access Panels

Donald Morris and Raymond Stone requested that the proposed AD allow local fabrication of the inspection panels as an alternative to purchasing the specified kit from Piper. One of these commenters requested the AD include the materials and dimensions of the parts in the kit so mechanics can fabricate these parts. The commenters

stated the inspection access panels require no special tooling or methods to fabricate and are within the capability of most mechanics, and local fabrication could save time and money for owners. Robert Nelson agreed it should not be necessary to purchase the parts from Piper.

The FAA partially agrees. The FAA has changed the proposed AD to remove the requirement to install access panels. Instead, this SNPRM proposes to allow other methods of accessing the inspection area. Because the proposed AD no longer requires installation of the Piper kit, the commenters' request is no longer necessary.

Request for Exemption from Compliance

Kenneth Vida asked whether the proposed AD would apply to their airplane. The commenter stated that the wings of the PA-28-180C were removed and no corrosion found on the wing spars or the pocket in the airframe. The wings were reinstalled in the summer of 2016 and the airplanes resumed operating in April of 2017. The FAA infers that the commenter is requesting credit for a prior maintenance event. Ross Tracey requested that airplanes that have been inspected as specified in Piper SB No. 1006 within the last two years be exempt from the proposed AD.

The FAA disagrees. Piper SB No. 1006 specifies inspecting the spar structure "behind the fuel tank," which is outboard of the inspection area in the proposed AD. Accomplishment of SB No. 1006 alone would not satisfy compliance with the proposed AD.

The FAA has revised the proposed AD to allow credit for prior inspections performed in accordance with Piper Service Bulletin No. 1304, dated August 23, 2017, under certain conditions. For operators who seek credit for other methods, under the provisions of paragraph (j) of this AD, the FAA will consider requests for approval of an alternative method of compliance (AMOC) if sufficient data is submitted to substantiate that the method provides an acceptable level of safety.

Request to Update the Costs of Compliance

Five commenters, including AOPA, requested the FAA update the cost of complying with the proposed AD. These commenters stated that pricing for the Piper kit of \$175 in the Cost of Compliance section is too low. One of these commenters requested that the cost estimate include the cost of applying a protective coating to the inspection panels to match the airplane's existing exterior coating.

The FAA partially agrees. This SNPRM updates the cost of the access panel kit, which is now proposed as an optional installation and not a required installation. The cost analysis in AD rulemaking actions typically includes only the costs associated with complying with the AD. Accordingly, the FAA is not including the cost of applying a matching protective coating because that activity is not required to comply with any portion of the proposed AD.

Related Service Information under 1 CFR part 51

The FAA reviewed Piper Service Bulletin No. 1304A, dated August 14, 2018. The service bulletin contains procedures for installing an inspection access panel in the lower wing skin near the left and the right main wing spars, if not already there, inspecting for corrosion, and, if corrosion is found, taking all necessary corrective actions. The service bulletin also contains procedures for applying corrosion prevention and for verifying that the top inboard wing skin thickness meets or exceeds the minimum thickness after corrosion is removed. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

FAA's Determination

The FAA is proposing this AD because it evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design. Certain changes described above expand the scope of the NPRM. As a result, the FAA determined that it is necessary to reopen the

comment period to provide additional opportunity for the public to comment on this SNPRM.

Proposed Requirements of this SNPRM

This SNPRM would require inspecting the left and right main wing spar for corrosion, and, if corrosion is found, taking all necessary corrective actions.

Differences Between this SNPRM and the Service Information

Piper SB No. 1304A, dated August 14, 2018, provides the manufacturer's procedures for installing access panels on the lower skin of the left wing and the right wing for easier access to the left and right main wing spar. This SNPRM does not propose a requirement to install the access panels but would allow the installation as an option to access the inspection area.

Costs of Compliance

The FAA estimates that this SNPRM would affect 11,476 airplanes of U.S. registry.

The FAA estimates the following costs to comply with this SNPRM:

Inspection Costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Main wing spar inspection	2 work-hours X \$85 per hour = \$170 to inspect both wings	Not Applicable	\$170 per inspection cycle	\$1,950,920 per inspection cycle

Installation of Access Panels

Optional Action	Labor cost	Parts cost	Cost per product
Install inspection access panel in the lower wing skin near the left and the right main wing spars	6 work-hours X \$85 per hour = \$510 to install the inspection access panel on both wings	\$220 for the kit that contains provisions for installing inspections access panels on both wings	\$730

This proposed AD does not require the installation of the access panels for the visual inspection; however, it allows the installation of the panels, as one of four options, to access the inspection area.

On-Condition Costs

The extent of damage found during the required inspection could vary significantly from airplane to airplane. The FAA has no way of determining how much damage may be found on each airplane, the cost to repair damaged parts on each airplane, or the number of airplanes that may require repair.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

Piper Aircraft, Inc.: Docket No. FAA-2017-1059; Product Identifier 2017-CE-035-AD.

(a) Comments Due Date

The FAA must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to the following Piper Aircraft, Inc. model airplanes that are certificated in any category:

Table 1 to paragraph (c) of this AD – Affected Models and Serial Numbers

Model	Serial Numbers
PA-28-140	28-20001 through 28-26946, and 28-7125001 through 28-7725290
PA-28-150 and PA-28-160	28-1 through 28-4377, and 28-1760A
PA-28-180	28-671 through 28-5859, 28-7105001 through 28-7205318, and 28-7305001 through 28-7505261
PA-28-235	28-10001 through 28-11378, 28-7110001 through 28-7710089, and 28E-11
PA-32-260	32-04, 32-1 through 32-1297, and 32-7100001 through 32-7800008
PA-32-300	32-15, 32-21, 32-40000 through 32-40974, and 32-7140001 through 32-7840222

(d) Subject

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 5711, Wing Spar.

(e) Unsafe Condition

This AD was prompted by reports of corrosion found in an area of the main wing spar not easily accessible for inspection. The FAA is issuing this AD to detect and correct corrosion in the wing root area of the left and the right main wing spars. The unsafe condition, if not detected and corrected, could cause the main wing spar to fail, which could result in loss of airplane control.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Inspect the Left and Right Main Wing Spars for Corrosion

Within the next 100 hours time-in-service (TIS) after the effective date of this AD or within the next 12 months after the effective date of this AD, whichever occurs first, and thereafter at intervals not to exceed 7 years, inspect the forward and aft surfaces of the left and right main wing spars between wing station (WS) 24.24 and WS 49.25 for corrosion as follows.

(1) Gain visual access to the inspection area by complying with either paragraph (g)(1)(i), (ii), (iii), or (iv) of this AD.

Note 1 to paragraph (g)(1) of this AD: Step 1 and figure 1 in Part I Wing Spar Inspection of Piper Aircraft, Inc. Service Bulletin No. 1304A, August 14, 2018 (Piper SB No. 1304A), contain instructions you may use for identifying the inspection area and determining if wing access panels have been installed.

(i) Remove existing wing inspection access panels and fairings.

(ii) Install Inspection Access Hole Kit part number 765-106V, and then remove the wing inspection access panels and fairings.

(iii) Access the inspection area during concurrent maintenance such as a wing tank removal, wing removal, or wing skin repair.

(iv) Use a lighted borescope capable of 10X or higher power magnification display through existing access points (e.g., wing root fairing, landing gear panels, internal lightening holes, or other access points depending on model).

(2) Identify the wing spar configuration for your airplane and clean the inspection area in accordance with step 3, table 1, and figure 2 (sheets 1 and 2) in Part I Wing Spar Inspection of Piper SB No. 1304A. Visually inspect each spar component for evidence of corrosion, including irregularities such as blisters, flakes, chips, lumps, bulging skin, and missing rivets.

Note 2 to paragraph (g)(2) of this AD: Paint coatings may mask the initial stages of corrosion, and faying surfaces, such as riveted lap joints, may hide corrosion.

(h) Corrective Actions

(1) If any evidence of corrosion is found during any inspection required by paragraph (g) of this AD, before further flight, remove the corrosion and determine whether the thickness of the component meets or exceeds the minimum thickness at all locations in accordance with table 2 and step 5 in Part I Wing Spar Inspection of Piper SB No. 1304A.

(2) If corrosion preventative compound was removed as part of any inspection required by paragraph (g) of this AD, before further flight, apply corrosion preventative compound by following step 1 in Part III Return to Service of Piper SB No. 1304A.

(i) Credit for Actions Done Following Previous Service Information

This paragraph provides credit for the initial inspection and application of corrosion preventative compound required by paragraphs (g) and (h)(2) of this AD if you performed the inspection before the effective date of this AD using Piper Aircraft, Inc. Service Bulletin No. 1304, dated August 23, 2017, and no evidence of corrosion was found.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Atlanta ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (k)(1) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (j)(3)(i) and (ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

(k) Related Information

(1) For more information about this AD, contact Dan McCully, Aerospace Engineer, FAA, Atlanta ACO Branch, 1701 Columbia Avenue, College Park, Georgia 30337; telephone: (404) 474-5548; fax: (404) 474-5606; email: william.mccully@faa.gov.

(2) For service information identified in this AD, contact Piper Aircraft, Inc., 2926 Piper Drive, Vero Beach, Florida 32960; telephone: (772) 567-4361; internet: www.piper.com. You may review this referenced service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Issued on July 20, 2020.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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